

Claims

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1. A fixative composition comprising the following components:

-ethanol;

-water;

10 -1,2-propanediol;

-polyvinyl alcohol and

-an effective amount of at least one monomeric polyhydroxy compound.

2. The fixative composition according to claim 1, wherein the monomeric
15 polyhydroxy compound is a carbohydrate comprising at least three carbon atoms.

3. The fixative composition according to claim 2, wherein the carbohydrate has
six carbon atoms.

20 4. The fixative composition according to claim 3, wherein the carbohydrate is a
hexitol such as D-sorbitol.

5. The fixative composition according to any of claims 1 to 4, wherein the
monomeric polyhydroxy compound is contained in an amount of from 0.05 to 2.00
25 wt.-%.

6. The fixative composition according to any of claims 1 to 5, wherein ethanol,
water, 1,2-propanediol and polyvinyl alcohol are contained in an amount of from 50 to
85 wt.-%, 10 to 40 wt.-%, 3 to 20 wt.-% and 0.05 to 3.00 wt.-% respectively.

30 7. The fixative composition according to claim 6, wherein the ethanol
concentration is 65 to 75 wt.-%.

8. The fixative composition according to any of claims 1 to 7, further containing
35 additives and/or auxiliary agents.

9. The fixative composition according to claim 8, wherein the additives and/or
auxiliary agents are selected from acceptable salts, alcohols, ketones, carboxylic acids,
sugars and polymers.

10. A kit for fixation of tissue comprising a first means for keeping a mixture of water, 1,2-propanediol, polyvinyl alcohol and an effective amount of at least one monomeric polyhydroxy compound and a second means for keeping ethanol.

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11. The kit according to claim 10, wherein the monomeric polyhydroxy compound is a carbohydrate comprising at least three carbon atoms.

12. The kit according to claim 11, wherein the carbohydrate has six carbon atoms.

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13. The kit according to claim 12, wherein the carbohydrate is D-sorbitol.

14. The kit according to any of claims 10 to 13, wherein the contents of the first and the second means are mixed providing a fixative comprising 50 to 85 wt.-% of ethanol, 10 to 40 wt.-% of water, 3 to 20 wt.-% of 1,2-propanediol, 0.05 to 3.00 wt.-% of polyvinyl alcohol and 0.05 to 2.00 wt.-% of the monomeric polyhydroxy compound.

15. The kit according to any of claims 10 to 14, wherein the mixture of the first means further contains additives and/or auxiliary agents.

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16. The kit according to claim 15, wherein the additives and/or auxiliary agents are selected from acceptable salts, alcohols, ketones, carboxylic acids, sugars and polymers.

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17. A use of the fixative composition according to any of claims 1 to 9 or the kit according to any of claims 10 to 16, for examining tissue samples in histopathology, cytology and in immunohistochemistry.

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18. The use according to claim 17, wherein the tissue samples are of organs of human and animal origin.

19. The use of claim 18, wherein a biopsy sample is examined.

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20. The use according to any of claims 17 to 19, wherein the sample is fixed within a period of 15 minutes and 5 hours.

21. The use according to claim 20, wherein a biopsy sample is fixed within 20 minutes.

22. The use according to any of claims 17 to 21, wherein a biopsy sample or surgical specimen is tested for proteins and/or nucleic acids.

23. The use according to claim 22, wherein the specimen is tested for an antigen.

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24. The use according to any of claims 17 to 23, wherein the fixation is carried out in the presence of microwaves.